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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,394	09/13/2000	Yasuhiro Komori	862.C2001	8092

5514 7590 10/06/2004

FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER

NOLAN, DANIEL A

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/661,394

Applicant(s)

KOMORI ET AL.

Examiner

Daniel A. Nolan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,8,10,12,14,18,19,21,23,25,26,28,30,32,34,35,37 and 39-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,8,10,12,14,18,19,21,23,25,26,28,30,32,34,35,37 and 39-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

***DETAILED ACTION***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 30 June 2004 has been entered.

***Response to Amendment***

3. The filing of 30 June 2004 was entered to the effect that the claims were changed as indicated and examined on the merits.

***Response to Arguments***

4. Applicant's arguments filed 30 April 2004 have been fully considered but they are not persuasive.

- Applicant's argument, see page 2 lines 5-9, filed 30 April 2004, with respect to claim 4 has been fully considered and are persuasive. The objection of claim 4 on formalities is withdrawn.
- Applicant's argument, see page 2 lines 10-14, filed 30 April 2004, with respect to claim 23 has been fully considered and are persuasive. The rejection of claim 23 for being indefinite is withdrawn.
- In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *client*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
- The argument that Goldberg et al teaches that various models are prepared and stored in advance is incomplete and is not among the issues that read on the features of the claims. Consequently, the opportunity is afforded to present the prior art of Goldberg et al for explicit rejection in addressing newly claimed materials.

***Claim Rejections - 35 USC § 102***

Goldberg et al

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 6, 21, 25, 26, 30, 34, 35, 40 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Goldberg et al (U.S. Patent 5,970,446).

7. Regarding claims 1, 6, 21, 25, 26, 30, 34 and 35; Goldberg et al, with the invention for a *robust speech recognition method in noisy environments*, reads on every feature of the claims for a *speech input terminal in a speech communication system* as follows:

- Goldberg et al read on the feature of the *speech input terminal* (and/or apparatus, communication system, control method & storage medium) *transmitting inputted speech data to a speech recognition apparatus through a network* (column 3 line 55-59), and the *speech recognition apparatus executing speech recognition processing for the speech data transmitted from the speech input terminal* (column 3 line 13).
- Goldberg et al read on the feature of *speech input* (110 in figure 2);
- Goldberg et al read on the feature *for creating a model based on information captured by the speech input* (column 3 line 36), *the model being for environment*

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*adaptation for speech recognition in the speech recognition apparatus* (column 3 lines 46-53) and

- Goldberg et al read on the feature *for transmitting the model to the speech recognition apparatus* (column 3 lines 58-64).

8. Regarding claims 40 and 41; the claims are set forth with the same limitations as claims 1 and 25, respectively. Goldberg et al read on the feature *for receiving the results of the speech recognition from the speech recognition apparatus* (30→40 in figure 1).

**Suzuki et al**

9. Claims 1, 2, 4, 6, 8, 21, 25, 26, 30, 34, 35 and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al (U.S. Patent 5,749,068).

10. Regarding claims 1, 6, 21, 25, 26, 30, 34 and 35; the invention for speech recognition apparatus and method in noisy circumstances of Suzuki et al reads on every feature of the claims for *a speech input terminal* (column 1 line 37 & column 8 line 3) *in a speech communication system* (column 7 lines 35-36) as follows:

- Suzuki et al reads on the feature of the *speech input terminal for transmitting inputted speech data to a speech recognition apparatus* (column 7 line 50) *through a network* (using *any system type*, column 7 lines 54-55), and the *speech recognition*

- apparatus executing speech recognition processing for the speech data transmitted from the speech input terminal (by the collating process – see column 3 line 4),*
- Suzuki et al (column 8 line 3) reads on the feature of *speech input means* and the feature of *creating a model* (i.e. the “noise” model of column 8 line 6) *based on information captured by the speech input means, the model being for environment adaptation for speech recognition in the speech recognition apparatus* (1→9 in figure 23 – see column 1 lines 35-47) *and*
  - Suzuki et al (column 8 lines 14-19) reads on the feature of *communication transmitting the model to the speech recognition apparatus* (described as *output* in column 8 lines 41-45).
  - With particular regard to the feature of claims 6, 26 and 35, Suzuki et al discloses that the model is *received* (as depicted, for example, by 14→17 in figure 13) for *executing speech recognition* (18 in figure 13).

11. Regarding claim 2, the claim is set forth with the same limitations as claim 1.

Suzuki et al reads on the feature that *the model indicates at least one of a characteristic of the speech input, a noise characteristic* (with the SNR of column 8 line 23), *and a speaker characteristic*.

12. Regarding claim 4, the claim is set forth with the same limitations as claim 1.

Suzuki et al reads on the feature of *storing the model* (column 3 line 57), *determining whether there has been a change in the model in each transmitting of the speech data*



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(column 3 lines 28-31); *and notifying the speech recognition apparatus of the corresponding model, when there has been no change in the model.*

13. Regarding claim 8, the claim is set forth with the same limitations as claim 6.

Suzuki et al reads on the feature of *creating an environment adaptation speech recognition model* (i.e. the "noise" model of column 8 line 6) *on the basis of the received model.*

14. Regarding claim 39, the claim is set forth with the same limitations as claim 1.

Suzuki et al reads on the feature that *the model is an average* (10 in figure 24) *or variance of the captured information.*

### **Claim Rejections - 35 USC § 103**

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Suzuki et al & Satoh et al**

16. Claims 3, 10, 23, 28, 32 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Satoh et al (U.S. Patent 5,293,588 A).

17. Regarding claims 3 and 10; the claims are set forth with the same limitations as claims 1 and 8, respectively. Suzuki et al does not mention a *quantization table*. The speech detection apparatus (that is) not affected by input energy or background noise level of Satoh et al reads on the feature of *quantizing the speech data* (column 2 line 67 to column 3 line 9) *using a quantization table before transmitting the speech data to the speech recognition apparatus*, (column 9 lines 55-58) *the quantization table being received from the speech recognition apparatus* (column 9 lines 3-8).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Satoh et al to the device/method of Suzuki et al so as to allow a mobile speech processing apparatus to be used a variety of environments without adjustment.

18. Regarding claim 23 and claims 28, 32 and 37; the claims are set forth with the same limitations as claims 21, 26, 30 and 35, respectively. Suzuki et al reads on the feature/step of *creating an environment adaptation speech recognition model* (i.e. the “noise” model of column 8 line 6) *on the basis of the received model* but Suzuki et al does not mention a *quantization table*.

Satoh et al reads on the feature of *quantizing the speech data* (column 2 line 67 to column 3 line 9) *using a quantization table before transmitting the speech data to the speech recognition apparatus*, (column 9 lines 55-58) *the quantization table being received from the speech recognition apparatus* (column 9 lines 3-8). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Satoh et al to the device/method of Suzuki et al so as to allow a mobile speech processing apparatus to be used a variety of environments without adjustment.

**Suzuki et al, Satoh et al & Nomura et al**

19. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Satoh et al and further in view of Nomura et al (U.S. Patent 4,907,274 A).

20. Regarding claim 12, the claim is set forth with the same limitations as claim 10. Neither Suzuki et al nor Satoh et al mention *distribution*. The intelligent work station of Nomura et al reads on the feature where *the quantization table is created based on the distribution of the environment adaptation speech recognition model* (column 14 lines 1-6).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Nomura et al to the device/method of Suzuki et al & Satoh et al to use a standard pattern for composite similarity calculation based on proper value and vector.

**Suzuki et al & Tchorzewski et al**

21. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Tchorzewski et al (U.S. Patent 4,922,538 A).

22. Regarding claims 14 and 18, the claims are set forth with the same limitations as claims 6 and 8, respectively. Suzuki et al does not specify *multiple terminals*.

Tchorzewski et al reads on the features where the *speech communication system comprises a plurality of speech input terminals (2 in figure 1) and storing the model in correspondence with each of the speech input terminals (column 2 lines 1-13)*, where the multi-user speech recognition system has data base storing templates for transfer to recognizers assigned to specific terminals.

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Tchorzewski et al to the device/method of Suzuki et al so as to avoid setting up the terminal to compensate for every variation in operation.

**Suzuki et al, Satoh et al & Tchorzewski et al**

23. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Satoh et al and further in view of Tchorzewski et al.

24. Regarding claim 19, the claim is set forth with the same limitations as claim 10. The features of the claim are the same as those of claims 14 and 18, and the claim is rejected for the same reasons.

### **Conclusion**

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A. Nolan whose telephone number is (703)305-1368. The examiner can normally be reached on Mon, Tue, Thu & Fri, from 7 AM to 5 PM. If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached at (703)305-9645.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The fax phone number for Technology Center 2600 is (703)872-9314. Label informal and draft communications as "DRAFT" or

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"PROPOSED", & designate formal communications as "EXPEDITED PROCEDURE".

Formal response to this action may be faxed according to the above instructions,

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or hand-deliver to: Crystal Park 2,  
2121 Crystal Drive, Arlington, VA,  
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan  
Examiner  
Art Unit 2654

DAN/d  
September 25, 2004

A handwritten signature in black ink, appearing to read 'Daniel A. Nolan', with a large, stylized initial 'D' and 'N'.

**DANIEL NOLAN  
PATENT EXAMINER**